Linking Water, Climate Change, and Health

Photo: IDRC/ P. Bennet

Water quantity and quality have serious implications for human health, and are extremely climate sensitive. As climate change is expected to have negative impacts on both, an ecosystem-based understanding of the phenomenon is critical to an effective response. The issue is particularly pressing in water-stressed regions of West and North Africa.

The CCAA program and IDRC's Ecohealth program are jointly supporting a research and capacity-building initiative to explore the interconnections between water, health, and climate change. Eight research teams from institutions in West and North Africa have taken part in a project proposal development process, involving training, support, and feedback from IDRC program staff. CCAA will invest a total of CAD 1.3 million in the resulting research projects. As of June 2008 four proposals had been approved:

New Land, New Life
Near East Foundation / Center for Development Services
Location: West of Lake Nasser, Aswan, Egypt

This proposal addresses the potential human and environmental effects of climate change in the resettlement area west of Lake Nasser. The linkages between climate change and factors such as water and vector borne diseases, land degradation and land management methods, flooding, temperature fluctuations, agriculture and food security will be established and tested. Ultimately, the aim of this project is to ensure livelihood sustainability for settlers in the area west of Lake Nasser and to provide conditions suitable for further settlement communities to populate the region.

Integrated eco-systemic approach for optimization of small dams in Morocco
Institut National de la Recherche Agronomique (INRA)
Location: Morocco

In the arid and semi-arid areas of Morocco where water is already scarce and access to fresh water is limited, climate change will affect both quantity and quality of water resources, impacting food security and human health. The use of small dams to manage water resources contributes to climate change adaptation, but has other environmental impacts. This participatory action research project uses an ecosystem approach and will identify options relevant to the management of small dams to improve health, well being and the ability of rural communities to adapt to climate change.

An ecosystems approach to managing water and health in the context of climate change: Adaptive strategies to drought and flooding in four West African countries
Centre Suisse de Recherches Scientifiques en Côte d'Ivoire (CSRS)
Location: Côte d'Ivoire, Togo, Mauritanie, Senegal

Using an ecosystem approach, this project aims to strengthen the capacities of communities to adapt to drought aggravated by sudden flooding in two contexts (semi-arid and tropical humid) in West Africa. The project will establish a regional platform for collaboration on the effects of climate change on water and health in West Africa through engagement and knowledge sharing.

Adaptation to climate change and strategies to reduce the risk of water-borne illnesses in Guinea's forested zones
Centre d'Études et de Recherche en Environnement, Université de Conakry
Location: Guinea-Conakry

This project aims to develop and introduce important adaptation measures in Guinea's forested areas and to help reduce the risk of water-borne illnesses, schistosomiasis in particular. Key tools for adaptation will be developed, integrating traditional knowledge, learning, and communication practices. Expected results include the creation of tools for adapting to climate change which take into account sanitary conditions and the sustainable management of water resources.

Monitoring adaptive capacity

IDRC photo: P. Bennett

How do we measure progress in adapting to climate change? As a program that aims to make African communities less vulnerable to the effects of global warming, the CCAA has a stake in supporting research and learning on how adaptation can be more effectively assessed.

In June 2007, IDRC approved a research support project oriented towards monitoring and evaluation (M&E) of adaptive capacity. This project will help CCAA program staff and partners better assess how their activities are contributing to adaptation, and to use M&E as a capacity strengthening tool. It will facilitate a community of practice that will involve M&E experts, CCAA-supported project teams, and program staff, in reflecting on ways to evaluate the capacity of vulnerable groups, organisations, governments and ecosystems to adapt to climate change. Through a learning-by-doing approach, the project aims to help participants use qualitative and quantitative markers to document progress. Research teams and their partners will be better equipped to use photography, video and audio recordings, and written narrative to document and provide evidence of progress.

Project activities include an M&E capacity strengthening needs assessment; a literature review on M&E of adaptive capacity; and the development of training materials on the collection of narratives. Expert consultants will provide ongoing mentoring to program staff and project teams, through site visits and discussion groups.

In addition to these first activities focused on CCAA staff and partners, the program plans to support further research on monitoring and evaluation of adaptive capacity that will benefit regional and international efforts to support climate change adaptation.

2007